salmonicida Endonuclease I of SEQ ID NO: 2, *Serratia marcescens* Nuclease A of SEQ ID NO: 3, BacNucB of SEQ ID NO: 4, VcEndA-12glc of SEQ ID NO: 5, VcEndA-123glc of SEQ ID NO: 6, VcEndA-124glc of SEQ ID NO: 7, VcEndA-134glc of SEQ ID NO: 8, VcEndA-13glc of SEQ ID NO: 9, VcEndA-14glc of SEQ ID NO: 10, and VcEndA-1glc of SEQ ID NO: 11.

15-31. (canceled)

32. The viral vector production system of claim **1**, wherein the viral vector components comprise a nucleotide of interest (NOI).

33. The viral vector production system of claim **1**, wherein the viral vector components are retroviral vector components.

34. (canceled)

35. The viral vector production system of claim **33**, wherein the viral vector components comprise i) gag-pol; ii) env; iii) optionally the RNA genome of a retroviral vector; and iv) optional rev, or a functional substitute thereof.

36-41. (canceled)

42. The viral vector production system of claim **1**, wherein expression of the nuclease is inducible or conditional, and wherein the nucleic acid encoding the nuclease comprises an inducible or conditional promoter or regulatory element.

43. A production cell for producing viral vectors comprising nucleic acid sequences encoding: 1) viral vector components; and 2) a nuclease, wherein the nuclease is expressed in the viral vector production cell and secreted in cell culture thereby degrading residual nucleic acid during viral vector production, and wherein the production cell is a eukaryotic production cell.

44. The cell according to claim **43**, wherein the nuclease is an endonuclease, an exonuclease, or an endonuclease fused to an exonuclease.

45-51. (canceled)

52. A production cell for producing viral vectors comprising nucleic acid sequences encoding: 1) viral vector components; and 2) a nuclease fusion protein, wherein the nuclease fusion protein comprises an exonuclease domain fused to an endonuclease domain, and wherein the nuclease fusion protein is expressed in the viral vector production cell and secreted in cell culture thereby degrading residual nucleic acid during viral vector production, and wherein the production cell is a eukaryotic production cell.

53. The cell of claim **52**, wherein the endonuclease is a VcEndA.

54. (canceled)

55. A cell culture device comprising a viral vector production system comprising a viral vector production cell comprising nucleic acid sequences encoding: 1) viral vector components; and 2) a nuclease, wherein the nuclease is expressed in the production cell and secreted in cell culture thereby degrading residual nucleic acid during viral vector production.

56. (canceled)

57. A variant of a secreted nuclease capable of degrading residual nucleic acid during viral vector production, said variant comprising the amino acid sequence of SEQ ID NO: 11.

58. A modified nuclease having increased cell-retention and/or or cell-association that is expressed through the secretory pathway of a eukaryotic cell, wherein the modified nuclease comprises a retention signal at its C-terminus.

59-71. (canceled)

72. The viral vector production system according to claim **1**, wherein activity of secreted nuclease in the cell culture is at least about 1 unit per mL of equivalent Benzonase® nuclease activity as determinable by the assay presented as Assay 1 herein.

73-76. (canceled)

77. A nuclease helper cell wherein secreted nuclease activity within the helper cell culture is at least about 10 unit per mL of equivalent Benzonase® nuclease activity as determinable by the assay presented as Assay 1 herein.

78-82. (canceled)

83. The viral vector production system according to claim **1**, wherein the nuclease comprises a cell retention signal.

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